# Asbestos Requirements and Updates

Javier Ahumada Chief, Compliance and Enforcement 785-296-0243



**Asbestos** is a naturally occurring mineral fiber found in rock and soil that once was lauded for its versatility, recognized for its heat resistance, tensile strength and insulating properties, and used for everything from fire-proof vests to home and commercial construction. It was woven into fabric, and mixed with cement.



**Asbestos** refers to **six** unique substances that belong to the serpentine and amphibole mineral families: chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite.

Chrysotile is the most common found.

Crocidolite, due to its structure, is the most dangerous to human health.



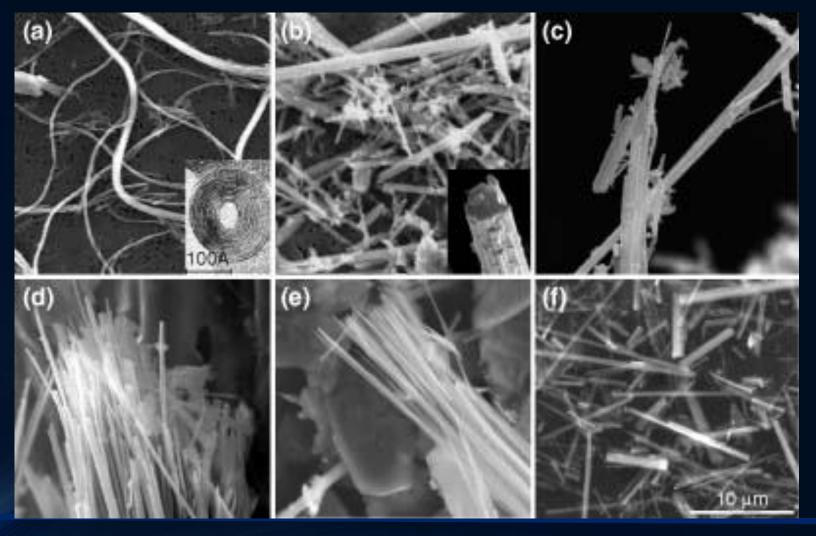
# ASBESTOS





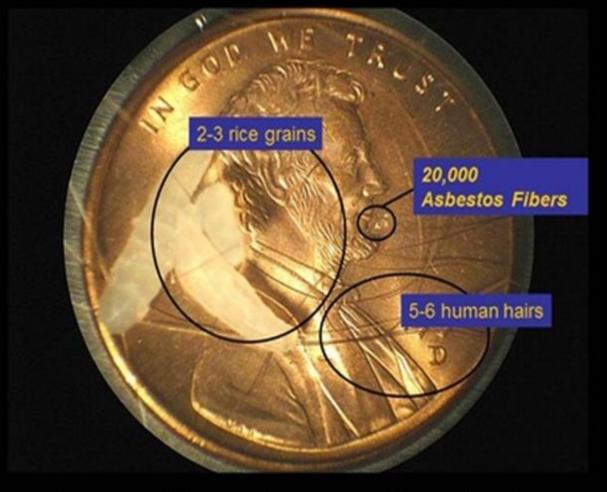








## How small is asbestos?



Their size is about 3—20 µm wide and can be as slim as 0.01 µm.

Human hair ranges in size from 17 to 181 µm in breadth

www.AsbestosDiseaseAwarenessOrganization.org

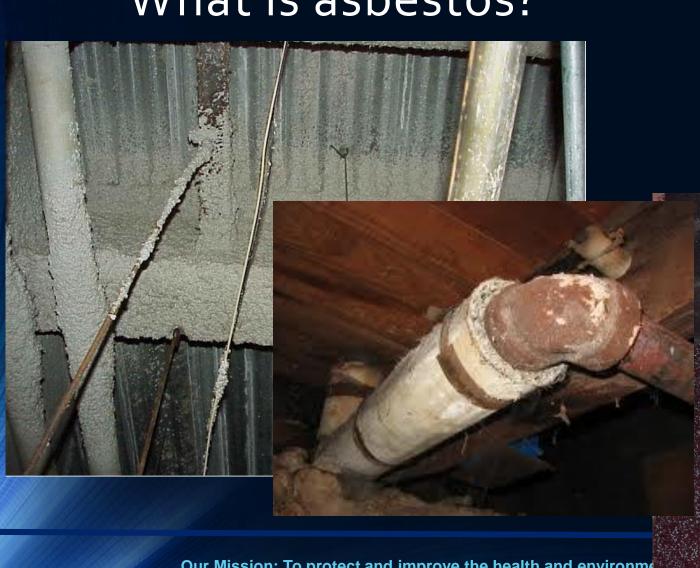


#### **Asbestos** can be found in:

- Attic and wall insulation produced containing vermiculite
- Vinyl floor tiles and the backing on vinyl sheet flooring and adhesives
- Roofing and siding shingles
- Textured paint and patching compounds used on wall and ceilings
- Walls and floors around wood-burning stoves protected with asbestos paper, millboard, or cement sheets
- Hot water and steam pipes coated with asbestos material or covered with an asbestos blanket or tape
- Oil and coal furnaces and door gaskets with asbestos insulation
- Heat-resistant fabrics
- Automobile clutches and brakes











**Asbestos** is dangerous because it causes asbestosis, mesothelioma and other forms of cancer.

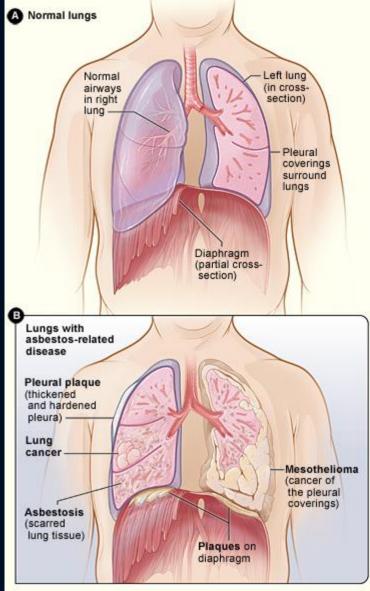
These diseases average 20-30 years after first exposure before they manifest.



Asbestosis is chronic, progressive inflammation of the lung.

#### Symptoms include:

- shortness of breath
- dry cough
- swelling of hands and feet
- chest pain

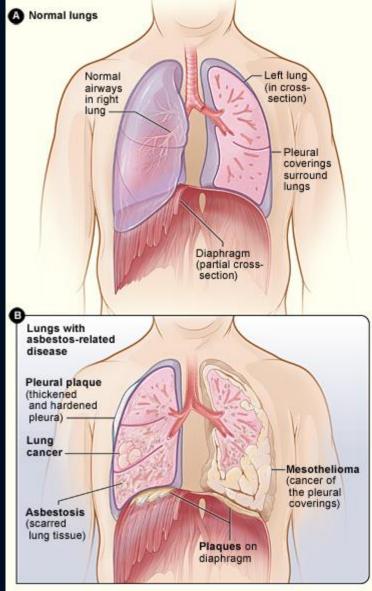




Mesothelioma is a disease that causes malignant cancer cells to form within the lining of the chest, abdomen, or around the heart.

#### Symptoms include:

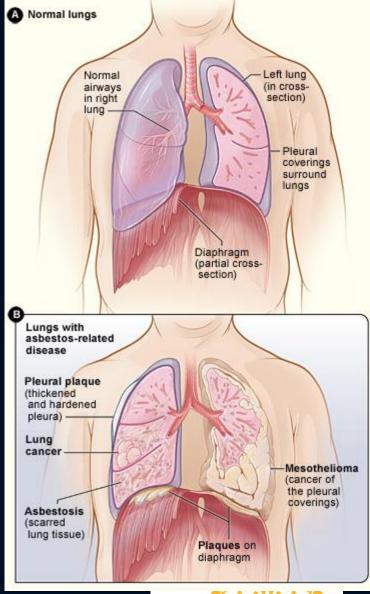
- shortness of breath
- dry cough/wheezing
- muscle weakness
- chest pain
- weight loss





Lung cancer is the most common cause of cancer related death in the United States. Smoking is attributed to 90% of lung cancer cases, while asbestos is about 4%.

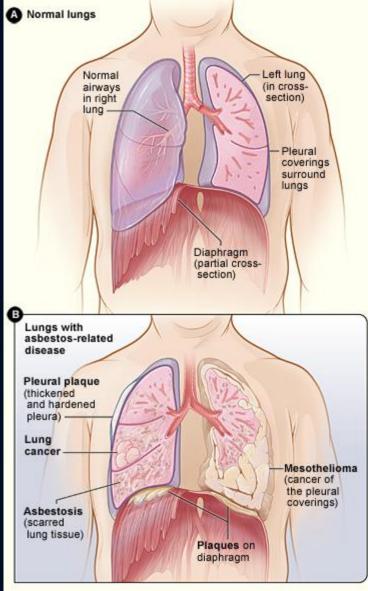
Symptoms are the same as from Mesothelioma.





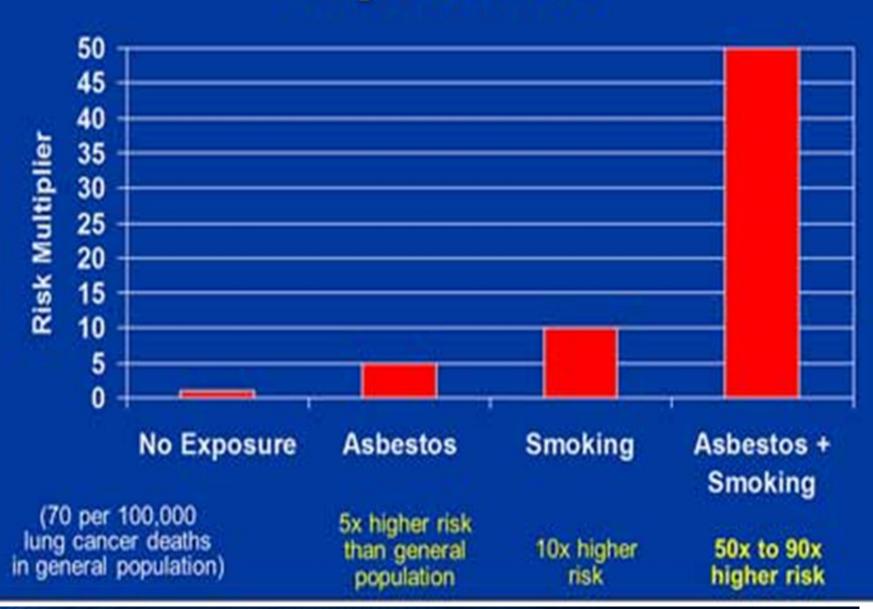
Lung cancer is the most common cause of cancer related death in the United States. Smoking is attributed to 90% of lung cancer cases, while asbestos is about 4%. Smokers who are also exposed to asbestos are on average 80% more likely to develop lung cancer!

Symptoms are the same as from Mesothelioma.





#### **Lung Cancer Risks**





## Asbestos classification

Friable vs non-friable

Friable ACM - >1% asbestos that can be crumbled, pulverized, or reduced to powder by hand pressure when dry



### Asbestos classification

Friable vs non-friable

Friable ACM - >1% asbestos that can be crumbled, pulverized, or reduced to powder by hand pressure when dry

Nonfriable ACM - >1% asbestos that cannot be crumbled, pulverized, or reduced to powder by hand pressure when dry



### Asbestos classification

Friable vs non-friable

Friable ACM - >1% asbestos that can be crumbled, pulverized, or reduced to powder by hand pressure when dry

Nonfriable ACM - >1% asbestos that cannot be crumbled, pulverized, or reduced to powder by hand pressure when dry

Nonfriable can be made friable by sanding, grinding, abrading



65-5304 requires asbestos abatement companies to obtain an annual business license from KDHE.

- \$1000 annual fee associated with this license.
- Business license holder is responsible for ensuring state and federal asbestos rules and regulations are followed.



- \$20/\$40 annual fee associated with this certification.
- Required proof of mandated annual asbestos safety/awareness training.
- Received a laminated ID certification card.



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- As of July 1, 2016, 65-5308 was eliminated from the statutes and is no longer in effect.
- Workers/supervisors must continue federally mandated training;
   NO CHANGETHERE



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- Required proof of mandated annual asbestos safety/awareness training.
- Received a laminated ID certification card.
- As of July 1, 2016, 65-5308 was eliminated from the statutes and is no longer in effect.
- Workers/supervisors must continue federally mandated training;
   NO CHANGETHERE
- Must present proof of training to inspector when onsite.



28-50-1: Definitions

An inspection by a qualified asbestos inspector is required for all commercial, industrial or residential buildings (5 units+) or structures if there is more than 25 lineal feet or 10 square feet of ACM.

NESHAP (40 CFR Part 61, Subpart M) triggers if the project contains 260 lineal feet or 160 square feet or more of ACM.

Renovations require inspection but don't require notification if less than 25 lineal feet or 10 square feet.

and Environment

28-50-8: Describes notification requirements in Kansas

Must submit an abatement notification form at least 10 business days prior to work.

Requires a \$50 base fee up to NESHAP, then fee adds 0.5% of the project cost up to max fee of \$2,500.

10 day wait period can be waived by paying double.



Postmarked Date		
Check Number:		
Project Number:		
	Office Use Only	

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#### PROJECT REVIEW FEE CALCULATION FORM

Name of Firm	License No.	
Project Location	City	
Total Contract Price (TCP) – Enter complete cost of project. I feet or 260 linear feet proceed to line 7.	200000000000000000000000000000000000000	
<ol><li>Associated Contract Charge (ACC) Calculation-Identify and t Total Contract Price (TCP) for work other than asbestos remo- insulation or fireproofing, remodeling work, demolishing stri- charge.</li></ol>	wal, such as reinstalling thermal  OCCOCCOCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	XX XX XX
Associated Contract Charge(s) (ACC)	Charge XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
2a.	200000000000000000000000000000000000000	
2b.	xxxxxxxxxxxxxxxxx	
-	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	CX
2c.	2 XXXXXXXXXXXXXXXXXXXX	¢Χ
Associated Contract Charge (AC	C) Total XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	(X
<ol> <li>Non-Regulatory Cost (NRC) Calculations – Identify and total a Contract Price (TCP) for asbestos removal related work that p are not required by the State's asbestos control regulations such etc.</li> </ol>	pertain to activities or items that	XX XX
Non-Provident Control Allings	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
Non-Regulated Costs(s) (NRC)	Cost XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
3a.	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
3b.	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
2.	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	
3c.	3 0000000000000000000000000000000000000	X
Non-Regulated Cost (NRC) To		(X
	4	
<ol><li>Add Line 2 (ACC) and Line 3 (NRC)</li></ol>	_	_
	5	
<ol><li>Sub Total Contract Correction – Subtract Line 4 from Line 1</li></ol>	6	_
<ol> <li>Fee Correction – Multiply Line 5 by 0.5% (.005); <u>Round Off To</u></li> </ol>	o Nearest Dollar.	_
	7	
<ol> <li>Baseline Project Review Fee</li> </ol>		_
O. Wather that Dalar Dalar Dalar Continue	. 7 8a <b>\$50.00</b>	
<ol> <li>Total Non-Adjusted Project Review Fee – Add Line 6 and Line</li> </ol>	700.00	_
<ol> <li>If 10 day pre-notification requirement waiver is requested, mult</li> </ol>	tiply Line 8a by 2 8b,	
8c. Total Adjusted Project Review Fee - Enter 8a or 8b, whichever	r is greater 8c.	_
I hereby certify, to the best of my knowledge and understanding, the true and correct.		_
Signed	L	_

#### Asbestos Notification Form

Fee calculation page



A	Postmarked Date:
1	PART A AUTHENTICATION
	hereby certify, to the best of my knowledge and understanding, the information provided in this notification is true, complete, and correct.
5	Signed Date
1	Print or Type Name Telephone No. ()
1	Name of Firm (or Agency) License No
2	Mailing Address of Firm (or Agency): Street or Box
	City State Zip Code
1	PART B PROJECT DESCRIPTION
1	Type of Notification: Original Amended Emergency 10-day Waiver APPROVED BY:
1	Purpose of Project (check one): Renovation Demolition Time & Materials Operation & Maintenance
1	. Building/Structure Owner
	Owner Name:
	Owner Address: Street City
	Owner Contact: Name Telephone No. ()
2	2. Building/Structure Description
	Address: Street City
	CountyBuilding Age: (Years)
	Past/Present Use:
	Future Use:
	Building Size: Total Floor Space (ft²) Number of Floors
3	3. Total Amounts of Friable Asbestos to be removed from Building/Structure
1	a) Friable asbestos removed from pipe surfaces (linear feet)
	Pipe removed by dismantling, with friable asbestos left in place (linear feet)
	c) Friable asbestos removed from other surfaces:
	Types of Surface Amount (ft²)

#### Asbestos Notification Form

Abatement company information and project description.



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Form	ET-ASB8	(02)
	Page 2 of	

#### PART B PROJECT DESCRIPTION (Continued)

constructed to provide access to them.

	d)	Other surfaces removed by dismantling with friable asb	estos left in place:	
		Type of Surface	Amount (ft²)	
	e)	Will any of the above surfaces be <u>hot</u> during removal?	YES	NO
		Type of Hot Surface(s)		
		Temperature(s) of Hot Surface(s)		F <sup>0</sup>
		Total Amounts of Non-friable Asbestos Materials Which	h May Become Friable:	
	f)	Category I Non-friable Asbestos Material(s) that will or	have been subjected to S	Sanding, Cutting, Grinding or Abrading:
		Amount(s)Ft <sup>2</sup>		Linear Ft
		Type(s) of Material		
	g)	Category II Non-friable Asbestos Material(s) that have or reduced to powder in the course of demolition or ren		coming or have become crumbled, pulverized
		Amount(s)Ft <sup>2</sup>		Linear Ft
		Type(s) of Material		
4.	Project	Schedule		
	Actual 1	Removal Dates: Start	Finish	
	Overall	Project Dates: Start	Finish	
PA	RTC	PROPOSED ASBESTOS REMOVAL WORK PRA	CTICES	
		r more supplemental sheets that provide a general plan vi the plan must indicate the following:	ew of the area(s) where i	friable asbestos-containing materials are to b
	a.	Location and size of work area boundaries as defined by	y existing entryways or to	emporary partitions.
	b.	Locations within the work area from which asbestos is t	to be removed.	
	c.	Proposed locations of HEPA equipped ventilating fans,	when required, and the I	ocation of their inlets and outlets.

Proposed locations of viewing windows, decontamination facilities, waste loadout facilities and any enclosed passageways

For glove bag removal projects that are identified in Part C, Item 2, the plan need only indicate the locations from which the asbestos is to be

**Asbestos Notification Form** 

Project description continued and proposed work practices.



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Form	ET-ASB8	(02/
	Page 3 of	

#### ART C PROPOSED ASBESTOS REMOVAL WORK PRACTICES (Continued)

	Proposed work practices and procedures to comply with K.A.R. 28-50-9(a)(11) and (12):
	Clearance monitoring procedures as described in 40 C.F.R. 763-90(i)
	High speed leaf blower and ventilation work practices and procedures
	Not applicable – proposed work procedures listed under Part C 3, 4, 5 or Part D only.
	Type and Amount of Material that will be Removed in Full Compliance with Basic Gross Removal Work Practice Requirement Contained in K.A.R. 28-50-9(a):
	Type of Material Amount Ft <sup>2</sup> Linear Ft
	Type and Amount of Material that will be Removed in <u>Full</u> Compliance with Glove Bag Removal Work Practice Requirement Contained in K.A.R. 28-50-9(c):
	Type of Material Amount Ft <sup>2</sup> Linear Ft
	Type and Amount of Material that will be Removed in Full Compliance with Outdoor Removal Work Practice Requirement Contained in K.A.R. 28-50-9(d):
	Type of Material Amount Ft <sup>2</sup> Linear Ft
	Type and Amount of Material that will be Removed in Full Compliance with Demolition Removal Work Practice Requirement Contained in K.A.R. 28-50-9(e):
	Type of Material Amount Ft <sup>2</sup> Linear Ft
	Type and Amount of Material that will be Removed under a Requested Waiver of Full Compliance with Basic Gross Removal Wo Practice Requirements Contained in K.A.R. 28-50-9(a):
	Type of Material Amount Ft <sup>2</sup> Linear Ft
	NOTE: If a waiver is to be considered, attach supplemental sheets which contain the following:
	<ul> <li>A brief description of each individual work practice intended to be waived.</li> </ul>
	b. The reason the waiver is being requested.
	<ul> <li>The subsection of K.A.R. 28-50-9 under which the waiver is being requested.</li> </ul>
	d. A brief description of the work practices that will be followed in place of those that are identified in item (a) above.
A.	RT D SPECIAL CONSIDERATIONS - DISMANTLING (K.A.R. 28-50-12)
	Amount of Asbestos – containing Material that will be Left Intact on the Disassembled Items that are to be removed from the Premise same as Part B Items 3b and 3d:
	Amount Ft <sup>2</sup> Linear Ft
	Work Practices and Amount of Asbestos to be Removed to facilitate Dismantling Activities must be reported in Part C.
	Describe how the Disassembled Items will be Handled and Disposed of:

#### Asbestos Notification Form

Proposed work practices continued and any requests for special consideration under K.A.R. 28-50-12



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	Page	4	of		

PA	RT E	WASTE DISPOSAL
1.	Indicate	Name and Address of Firm that will Transport Asbestos-containing Waste to Disposal Site:

2. Indicate Disposal Site:

3. Describe Method of Collecting and Disposing of Asbestos-containing Waste Water from Showers and Equipment Cleanup:

Shower Water:

 Describe Methods of Collecting and Disposing of Other Sources of Asbestos-contaminated Waste Water that will be Generated by this Project:

Types of Waste Water \_\_\_\_\_\_ Estimated Amount (Gal.)\_\_\_\_\_

5. Will a Trailer/Truck Mounted Vacuum System be used to Remove Asbestos-containing Waste?

YES \_\_\_\_NO

If yes, provide location of the trailer or truck on the general plan view that is required in Part C. On a Supplemental Sheet, describe measures to secure the area around the trailer/truck and associated equipment.

#### PART F SUPERVISOR CERTIFICATION

Indicate Name(s) of the Class II Supervisor(s) who will be Responsible for On-site Supervision:

\_\_\_\_\_\_

On a Supplemental Sheet or Sheets, List the Names and Certification Number of the Supervisors/Workers Involved with This Project.

#### ASBESTOS NOTIFICATION FORM SUPPLEMENTAL SHEET

Reference: Project Site \_\_\_\_\_\_\_ Notification Date \_\_\_\_\_\_

#### Asbestos Notification Form

Waste Disposal information as required by K.A.R. 28-50-14



28-50-8: Describes notification requirements in Kansas

Must submit a demolition notification form at least 10 business days prior to work.

Required for all demolitions, no fee. If friable ACM is present, must be abated first, then demoed.

Can request a "wet demo" if the structure is in "imminent danger of collapse." If approved, demolished while under constant water spray, then "burrito wrapped" in containers lined with polyvinyl sheeting. Zero visible emissions allowed, including any water runoff from possible punctures. May appear to be easier, but great care must be taken to do a proper wet demo!

10 day wait period cannot be waived per federal rules.



Postmark Date For Office Use Only	
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Form ET-ASB10 (02/15)



#### KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT ASBESTOS DEMOLITION NOTIFICATION FORM

GENERAL INSTRUCTIONS: This Asbestos Demolition Notification Form is to be completed and submitted before a building or structure is to be demolished. NOTE: IF THE BUILDING OR STRUCTURE CONTAINS FRIABLE ASBESTOS-CONTAINING MATERIALS, THE ASBESTOS NOTIFICATION FORM (ET-ASBS) MUST BE COMPLETED AND SUBMITTED TO THE DEPARTMENT. THIS ASBESTOS DEMOLITION FORM WILL NOT BE ACCEPTED FOR REPORTING THE REMOVAL OF FRIABLE ASBESTOS-CONTAINING MATERIALS FROM BUILDINGS SCHEDULED FOR DEMOLITION. This form is to be received by the Department not less than 10 working days before the demolition project is scheduled to start. Any notification that is incomplete or any notification indicating site activities to be in violation of applicable regulations will be considered an invalid notification.

Separate notifications must be provided for each building or other individual facility where demolition of said building or facility is to be demolished. Additional copies of this form should be reproduced as needed.

Under most circumstances, the removal of Category I nonfriable asbestos-containing materials will not be required prior to demolition unless the building is to be burned or the materials are considered to be friable. Category II nonfriable asbestos-containing materials must be removed prior to demolition if the materials would be subject to crushing, crumbling or pulverizing during the process of demolition of the building or structure.

Mail the original, signed and completed form to:

KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT BUREAU OF AIR 1000 SW JACKSON, SUITE 310 TOPEKA, KANSAS 66612-1366 (785) 296-6024

#### PART A AUTHENTICATION

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I hereby certify that, to the	best of my knowled	ge and understanding	, the information p	provided is complete, true and correct.	
Please type or PRINT NAME LEGIBLE		Title			
Signature			Date		
Name of Firm					
Telephone No(	)				
PART B PROJECT D	ESCRIPTION				
Building/Structure Owner _					
Owner Address:	Street				
	City		State	Zip	
Owner Contact:	Name			Telephone No()	
Building Address: Street_			City	County	
Present Use:		Past Use:		Age of Building:	
Building Floor Space: (sq ft	)			No. of Floors:	
Scheduled Demolition	Start _		Cor	mpletion//	
Describe how building will	he demolished:				

#### Demolition Notification Form



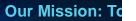
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ART C INSPECTION INFORMATION	
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as an inspection for asbestos conducted for this projection	ect?Y	es	No		
yes, provide the following information:					
spector Name		Date Inspect	ed		
ddress	City		State		
elephone No()					
ccreditation by		Exp. Date			
ovide method used to detect the presence of asbestor	s material, including	analytical method	s:		
ART D DEMOLITION CONTRACTOR IN	FORMATION				
ontractor:					
ddress:					
ity:	State		Zip		
ontact:		Telephone No. (	)		
ART E IDENTIFIED ASBESTOS CONTAI	INING MATERIA	ALS			
onfriable Category I:	s.f.		1.f.		c. yd.
onfriable Category II:s.	.f		1.f		c. yd.
iable Asbestos	s.f.		1.f.		c. yd.
friable asbestos-containing materials are present stat	te who will be remov	ring the material ar	nd when it will be ren	moved:	
nonfriable Category II asbestos-containing material t become friable (crushed, crumbled, or pulverized):		y state the work p	ractices intended to	be used to insure these	materials
building or structure to be burned?Yes _ bestos-containing materials and any additional mater					NOTE:
as demolition ordered by a Local Government becau-		ructurally unsafe a	and in danger if immi	nent collapse?	
ART F WASTE DISPOSAL					
isposal Site:					
DHE Licensed Municipal Solid Waste (Sanitary) or	Construction/Demoli	ition (C&D) Land	fill Permit Number _		
ocation: City	County		State		
aste Transporter:					

#### Demolition Notification Form





28-50-9: Describes work practices for asbestos-removal projects in occupied spaces.

Contains instruction on building enclosures, decontamination facilities, waste load-out areas, HEPA filtration and negative air pressure requirements, warning signs, etc.





Department of Health and Environment

28-50-14: Describes disposal requirements for ACM.

Friable ACM must go to an approved landfill.

- Fenced and displays warning signs
- Must send in dump tickets to KDHE
- Must ensure non-friable ACM does not go to a crusher, concrete reclamation, rip-rap use, bank stabilization use, etc.
- Requires 45 day wait period and a Class II on site when digging/drilling into an ACM disposal landfill.







#### Questions?

Phil Schlaman

785-296-1549

PSchlaman@kdheks.gov

Javier Ahumada

785-296-0243

JAhumada@kdheks.gov

Adam Irvin

785-296-1578

Airvin@kdheks.gov

Tina Gustafson

785-296-5505

CGustafson@kdheks.gov



